

## EQUIPMENT AND UTENSILS

**§58.214 General construction, repair and installation.**

All equipment and utensils necessary to the manufacture of dry milk products, including pasteurizer, timing-pump or device, flow diversion valve and recorder controller, shall meet the same general requirements as outlined in §58.128 of this subpart. In addition, for certain other equipment the following requirements shall be met.

**§58.215 Pre-heaters.**

The pre-heaters shall be of stainless steel or other equally corrosion resistant material, cleanable, accessible for inspection and shall be equipped with suitable automatic temperature controls.

**§58.216 Hotwells.**

The hotwells shall be enclosed or covered and should be equipped with indicating thermometers either in the hotwell or in the hot milk inlet line to the hotwell. If used for holding high heat products, they should also have recorders.

**§58.217 Evaporators and/or vacuum pans.**

Evaporators or vacuum pans or both, with open type condensers shall be equipped with an automatic condenser water level control, barometric leg, or so constructed so as to prevent water from entering the product. New or replacement units shall comply with the 3-A Sanitary Standards for Milk and Milk Products Evaporators and Vacuum Pans. When enclosed type condensers are used, no special controls are needed to prevent water from entering the product. Water collected from the condensing of product (cow water) in this equipment may be utilized for prerinsing and cleaning solution make-up; provided it is equipped with proper controls that will automatically divert water with entrained solids to the waste water system. "Cow water" shall not be used for acidified or final equipment rinse.

**§58.218 Surge tanks.**

If surge tanks are used for hot milk, and temperatures of product including

foam being held in the surge tank during processing, is not maintained at a minimum of 150 °F, then two or more surge tanks shall be installed with cross connections to permit flushing and cleaning during operation. Covers easily removable for cleaning shall be provided and used at all times.

**§58.219 High pressure pumps and lines.**

High pressure lines may be cleaned in-place and shall be of such construction that dead ends, valves and the high pressure pumps can be disassembled for hand cleaning. The high pressure pump shall comply with the 3-A Sanitary Standard for Homogenizers and Pumps of the Plunger Type.

**§58.220 Drying systems.**

(a) *Spray dryers.* Spray dryers shall be of a continuous discharge type and all product contact surfaces shall be of stainless steel or other equally corrosion resistant material. All joints and seams in the product contact surfaces shall be welded and ground smooth. All dryers shall be constructed so as to facilitate ease in cleaning and inspection. Sight glasses or ports of sufficient size shall be located at strategic positions. Dryers shall be equipped with suitable air intake filters. The filter system shall comply with the applicable requirements of the 3-A Accepted Practices for Milk and Milk Products Spray Drying Systems. The filtering system shall be cleaned or component parts replaced as often as necessary to maintain a clean and adequate air supply. In gas fired dryers, precautions should be taken to assure complete combustion. Air shall be drawn into the dryer from sources free from objectionable odors and smoke, dust or dirt. New systems, replacement systems, or portions of systems replaced shall comply with the requirements of the 3-A Accepted Practices for Milk and Milk Products Spray Drying Systems.

(b) *Roller dryers.* (1) The drums of a roller dryer shall be smooth, readily cleanable and free of pits and rust. The knives shall be maintained in such condition so as not to cause scoring of the drums.